

WILD LIFE RESERVES IN INDIA: ASSAM.

BY

E. P. GEE, M.A., C.M.Z.S., F.R.G.S.

(With two plates, a map and a table)

Assam consists of two separate administrative set-ups: firstly the province itself which includes all the plains areas, with only a small part of the hills, and secondly the Tribal Areas, which are mountainous, sparsely inhabited and in some cases unexplored. The province itself is, of course, under the provincial government with the usual Forest Department, in whose care are the forests and the wild life contained therein. The Tribal Areas, on the other hand, are under the Governor of the province—the Centre's representative—and his Adviser. A completely separate political department with its own Forest Officers looks after these areas with varying degrees of control. And under the new Constitution it seems that the general relationship of the Tribal Areas with the province will not be vastly different from what it was before.

THE COUNTRY AND ITS FORESTS

As the forests of the plains are mainly close to the foothills, most of Assam's wild life is now to be found near the borderland of these two administrations, provincial and political. It is for this reason that there is all the greater need for a separate Game Warden and/or Wild Life Department, which would be in a position to co-ordinate measures for the protection of wild life in both the provincial and tribal areas. This is particularly important as a large amount of fauna is migratory and spends the cold, dry season in the plains, but resorts to the hills in the rainy season when heat and floods compel the seeking of higher altitudes. Thus they pass from one sphere of control to another, often with disastrous results.

The area of Reserved Forests in the province itself is 6,675 sq. miles, or about 11 per cent of the total area. An effort is being made, it is understood, to increase this area of 11 per cent to something nearer the advocated 20 per cent by bringing in some of the 14,507 sq. miles of Unclassed State Forests. The gradual opening of these U. S. Forests for cultivation in the drive for greater food production has already caused a serious diminishing of this type of forest and the wild life it shelters. The area of actual sanctuaries, where wild life is completely protected, is only 426 sq. miles, or 6.4 per cent of Reserved Forests and .7 per cent of the total area of the province.

With regard to the Tribal Areas it is reported that the authorities concerned have taken steps to reserve some 1,700 sq. miles of forests. A region of 800 sq. miles near the borders of Assam, Burma and China has been declared as the Tirap Frontier Tract National Park, and an access road to it is now being opened up from the Ledo Road.

As head-hunting and inter-tribal wars have ceased, peace and 'civilization' with increasing population is causing an increase in the *jhuming* (shifting cultivation) for greater food production, with resultant loss to forests and wild life. It is obvious that sooner or later more forest reserves, especially in the catchment areas of the larger rivers, will need to be formed both for soil protection and flood prevention as well as for the preservation of the diminishing fauna and flora.

The type of terrain in this part of India varies according to altitude. Near the large rivers of the plains there are vast tracts of *bheels*, swamps and lowland savannah, such as constitute most of Kaziranga Game Sanctuary—ideal country for rhino, buffalo and deer except when abnormally high floods occur. Midway between these plains rivers and the hills are dense evergreen and mixed deciduous forests, which extend far into the foothills. Higher up in the Tribal Areas are thinner mixed forests with bamboo and plantain, and at 4,000 feet are to be found pine, oak, rhododendron and similar forests until the Tibetan type of country is eventually reached in the north. The fauna, only migratory within certain altitudes, naturally conforms to the terrain in which it is usually found.

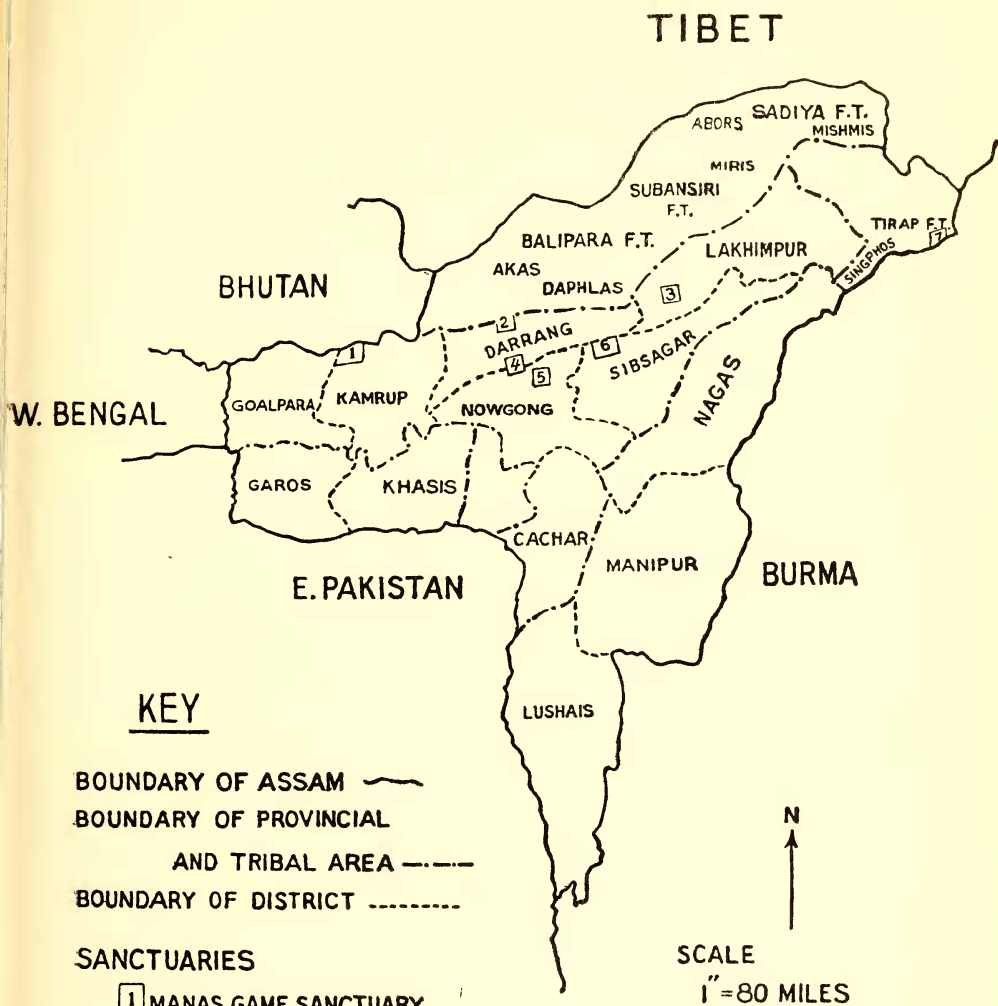
MEASURES TO PRESERVE WILD LIFE

Prior to 1930 little was done in Assam for the preservation of wild life, except the formation of the Manas and Kaziranga Game Sanctuaries for the protection of the Great Indian One-horned Rhino (*Rhinoceros unicornis*), which about 1905 had become very scarce due to the demand for its horn. For the protection of the elephant, of course, measures had been taken with the rest of India in accordance with the Elephant Preservation Act 1879.

In the early thirties, however, the revival of interest in wild life which was evident in most parts of India found Assam with one of its great Conservators of Forests—the late Mr. A. J. W. Milroy. It was due to him that the Elephant Hunting Rules became law, and catching operations were humanized and properly supervised, with immediate releases of cows with suckling calves caught in stockades. Extensive poaching in the Manas area was cleaned up by a company of Assam Rifles. Rhino horns were declared to be forest produce wherever found. Energetic steps were taken to encourage *bona fide* sport and study of natural history, and to prevent poaching and illicit shooting of any kind.

Later the new Shooting Rules for the Preservation of Wild Life in Reserved Forests came into force in 1938, with limits and royalties fixed for each type of game shot by license-holders, and so forth. Then came World War II in which Assam was the scene of preparations for operations in Burma, with vast numbers of military personnel stationed all over the province. The loss to wild life by indiscriminate shooting, dynamiting, etc., was as one would expect in war time, and was accompanied by a decline in effective interest by the authorities and public alike.

Early in 1949 the Assam Government invited the Bombay Natural History Society to send a party of naturalists to enquire into the wild life of the province, and to offer recommendations for improving and



MAP OF ASSAM

publicising the sanctuaries. Mr. Sálím Ali and Dr. Dillon Ripley with another came to Assam in March, and visited the four main sanctuaries. Mr. C. G. Baron gave them assistance and information concerning the Manas Game Sanctuary, while the writer had the privilege of accompanying them into Kaziranga Game Sanctuary and Pabha Reserve. The Conservator of Forests, Mr. P. D. Stracey, himself a keen naturalist, made all arrangements and maintained contact with the party. Mr. M. C. Jacob, the Junior Conservator of Forests also contacted the party in Kamrup.

In a memorandum submitted later to the Assam Government, this commission made valuable suggestions for the improvement of the sanctuaries and for the protection of wild life in general. In particular it exposed the optimistic complacency which had hitherto prevailed concerning the rhino population. The numbers of rhino are now considered to be much less than previously estimated by the Forest Department.

WILD LIFE SANCTUARIES

The **Manas or North Kamrup Game Sanctuary** consists of 105 sq. miles at an elevation of 200 to 700 feet above sea level, and was formed in 1905. It is not quite so accessible as Kaziranga, being some 90 miles by road from Gauhati, the nearest airfield. It is 10 miles from Barpeta Road Railway Station, and a cold weather road runs up through the sanctuary to the Bhutan Hills, along the Beki river (the eastern branch of the Manas). It is a place of great scenic beauty, and has the additional asset of good fishing in the rivers at certain times of the year.

The number of rhino in this sanctuary is variably estimated as 150 (Mr. Baron), 100 (the Conservator), 40-50 (the Divisional Forest Officer), and 8-9 (Mr. Sálím Ali and Dr. Ripley, who saw only the tracks of two during their six-day visit to the western portion of the sanctuary). There is obviously scope here for further investigation, and it is to be hoped that the Forest Department will arrange for this. Pending more information on the matter, it would not be unreasonable to put the figure at 45. Elephant are estimated at 250 and buffalo at 500, while bison would be in the neighbourhood of 100. Besides these there are many other animals and birds. The proposed hydroelectric scheme of the Manas river must be taken into consideration in any plans for the development of this sanctuary.

The **Sonai Rupai Game Sanctuary** consists of 85 sq. miles, is at an elevation of 400 to 700 feet above sea level, and was formed in 1934. This sanctuary is not very accessible, and game in it is extremely difficult to find owing to the impenetrable nature of the terrain and the restricted visibility. It is, however, an excellent Natural Reserve, and will continue to be so if poaching can be eliminated. It is estimated to hold a few rhino (about 5), over 50 bison, some buffalo and other game. Like the Manas Sanctuary, this place is adjacent to the hills and there are good tracts of forests to the east and west, with resultant migrations to the hills and movements laterally.

The **Pabha Reserve** or **Milroy Buffalo Reserve** is an area of 20 sq. miles at an elevation of 300 to 350 feet, and was made a sanctuary in 1941. It is in a most inaccessible place and beyond the scope of tourists and visitors except of the serious naturalist type. It contains little beyond the buffalo, variably estimated from 50 to 150 head. These are a useful stock, as the bulls breed with the domesticated cows.

The **Orang Reserve** is a small sanctuary of about 24 sq. miles, at an elevation of only 200 to 250 feet, and was formed in 1915. It is on the north bank of the Brahmaputra, and is reported to contain about 10 rhino.

The **Laokhowa Reserve** is another small sanctuary for rhino of 26 sq. miles, at an elevation of 200 to 250 feet. It is on the south bank of the Brahmaputra, west of Kaziranga, and is supposed to contain about 20 rhino. Being overshadowed by its more important neighbour Kaziranga, this place is seldom visited and receives little attention.

The **Kaziranga Game Sanctuary** is the chief sanctuary of Assam for rhino and other game. It is 166 sq. miles in extent, is at an elevation of 200 to 250 feet above sea level, and was formed in 1908 when as a Reserve it was closed for shooting in order to protect the few remaining rhino from extinction. It became known as the Kaziranga Game Sanctuary in 1928, and was opened to visitors in 1937 when it was known that rhino had considerably increased in numbers. It stretches from milestone 116 to 140 on the main Assam Trunk Road, mid-way between Gauhati and Dibrugarh, and is very accessible to visitors. Only 50 miles from the regularly used airfield of Jorhat, its fame as a show place should increase.

The number of rhino in Kaziranga was believed to have been about 300 in 1940, when one could go in on inspection elephants and see a dozen quite easily. Nowadays, however, a similar visit would produce only half that number, and a number of rhino are known to have died of anthrax in 1947—no less than fourteen carcasses having been found. The present population is reckoned as being 150 head, and needs careful protection from trespass by domestic cattle.

In addition, there are about 500 head of buffalo in this sanctuary and numbers of hog deer, barking deer and pig. Swamp deer are becoming rarer, probably due to poaching. The bison have disappeared, but a small herd of elephant still remains. Kaziranga is also a valuable sanctuary for fish and wild-fowl which abound in and on its numerous *bheels*, and the poaching of these *bheels* needs elimination. It is to be hoped that the authorities concerned will pay heed to the resolution passed by the recent UNSCCUR conference of UNESCO, which urged that all steps be taken to make Kaziranga a good and inviolate sanctuary, free from cattle trespass and other harmful influences.

The **Tirap Frontier Tract National Park** has only just recently been gazetted. It is a mountainous region in the corner of Assam where the borders of Burma and China meet, rather inaccessible and



A half-grown rhino is cine-filmed by Dr. Dillon Ripley and Mr. Salim Ali in Kaziranga Game Sanctuary.



This herd of wild buffalo in the Pabha Reserve stood for their cine picture, and then disappeared into cover.



This full-grown bull rhino in Kaziranga Game Sanctuary charged us once, and was thinking about repeating his charge as this picture was taken.



Photos by

Author

A catch of fourteen wild elephants in a stockade in Assam.

impenetrable. The official description of the park as a wild life sanctuary is: 'The area chosen is a meeting place of Burmese and Indian flora and fauna and will be the only place in the world where certain species such as takin, musk deer and serow are protected, and it is believed that a few specimens of *Rhinoceros sumatrensis*, which is extinct elsewhere, survive in the proposed park.'

The writer has lately been making careful enquiries, however, and it appears to be very doubtful if these rhino still exist. Musk deer, takin and serow are probably to be found in greater numbers on the north bank of the Brahmaputra in the foothills of the Himalayan Range, in less inaccessible places. In fact it seems doubtful if a wise choice has been made by the authorities concerned for a National Park in this forbidding area, which is more in the way of being a Natural Reserve suitable only for the more serious type of scientific naturalist. It is five days' march from the nearest road, and lacks any kind of track except a few made by wild elephants. It would be a pity if money was expended on a project of such doubtful value, when other urgent proposals for the protection of wild life are having to be shelved. There may yet be time to reconsider the necessity of creating this park, and the present Adviser to the Governor has assured the writer that the fullest consideration will be given to the views expressed above. In the meantime the axe of economy has descended abruptly on this as well as on other similar projects.

THE MORE IMPORTANT FAUNA

Elephas maximus. The Indian Elephant is Assam's most important animal from the economic point of view. The revenue from elephant royalty and monopoly fees collected after catching operations has been considerable in recent years:

1945-46	282 elephants	Rs. 2,41,702
1946-47	350 elephants	Rs. 4,23,642
1947-48	370 elephants	Rs. 4,43,332

In spite of these numbers having been caught and others having been shot by holders of Control Licenses, the elephant population seems to be in a strong position. If an average of 334 elephants are captured or killed each year, it would mean that if their numbers remained the same their total population would be in the neighbourhood of 5,350 head for both the province and the Tribal Areas. The valuable stock of wild elephants should not be allowed to suffer too severe a reduction. The policy of the Forest Department has wisely been to allow catching operations only in those areas in which elephants are known to be on the increase, or causing serious damage to crops. In addition to this, holders of Control Licenses destroy the occasional rogue or solitary male doing damage.

The recent epidemic which caused the death of at least 55 wild elephants in the North Cachar Hills is a cause of great concern. The outbreak, which occurred last June and July, has not yet been fully investigated. A similar epidemic some ten years ago in exactly the same area caused many deaths of elephant and bison, and it is to be hoped that the Forest Department will be successful in their efforts to prevent a recurrence.